



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

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ENFORCEMENT &
COMPLIANCE ASSURANCE
DIVISION

October 27, 2021

Eric Weber
Project Coordinator
Landau Associates
2107 South C Street
Tacoma, Washington 98402

Re: Cow Palace Dairy Lagoon 1 Closure Report
Administrative Order on Consent ("Consent Order")
Docket No. SDWA-10-2013-0080
Yakima Valley Dairies, Washington

Dear Mr. Weber:

EPA has completed our review of:

- Cow Palace Dairy Lagoon No. 1 and Safety Debris Catch Basin Completion Report ("Report") (March 31, 2020)

Based on our review, EPA has these comments.

General Comment

The catastrophic windstorm "blowout" of the "completely installed" primary (lower) liner is buried and scattered in photos, tables and drawings contained in appendices of the Report. It appears the liner was ripped in two by the wind along a 350-foot tear that ran east-west across the middle of the liner. These two photos and captions are copied from the Report:



IMG_082510.JPG

50-mil liner blowout at north end of Lagoon 1
November 29, 2019 at 08:25:10 AM



IMG_101010.JPG

50-mil liner blowout at southern half of Lagoon 1.
November 29, 2019 at 10:10:10 AM

The EPA-approved design documents, including but not limited to the QA/QC Manual,¹ did not envision such extensive damage, and were not written to address it. Forces strong enough to move, tear, and crumple a liner of this size, in addition to the subsequent effort to pull the secondary liner back into place with heavy equipment, would have placed significant stress on the seams and the liner material.

Specific Comments

1. This brief description appears in Appendix A, the Construction Quality Assurance Firm Report:

Wind-Blown Secondary Liner Event

On November 28, 2019 and over the Thanksgiving break, the completely installed secondary liner was blown out of place and damaged by high winds. The wind-blown liner was restored and repaired over the next eight (8) days between November 29 and December 6, 2019. A series of photographs showing the results of the wind-blown event and operations to restore the secondary liner installation are presented in Attachment A; Select Photographs. Efforts to restore the secondary liner were monitored by PEAKG and documented in Daily CQA Reports, and executed repairs are verified on standard Repair Logs presented in Attachment V; Primary and Secondary Repair Logs. The restored secondary liner installation was re-examined, re-inspected and cleared for the overlying primary geomembrane installation on December 6, 2019.

Add a detailed narrative summary of the “wind-blown secondary liner event” to the main body of the Report in a new section entitled “Wind-Blown Secondary Liner Event” that includes a copy of this text. Keep and adjust the references including the reference to the photographs. The narrative summary must include:

- a. After the second sentence in the “Wind-Blown Secondary Liner Event” paragraph, add this sentence, “The installed liner was ripped in two from east to west by the wind, resulting in a 350-foot tear.”
- b. Cite and describe the design document requirements for preventing wind-driven damage to the liner, and the actions Respondent implemented prior to the windstorm in accordance with those requirements.
- c. Add text that describes each area where the liner was displaced by the wind, the 350-foot east-west tear across the liner bottom, all other damage, and what was done to repair different areas and types of damage. For example, describe the 35-foot tear --- whether a seam failed or the liner material tore.
- d. Add text indicating whether Respondent considered replacing the liner with new, undamaged material. Add text explaining the basis for Respondents’ decision to repair rather than replace the entire secondary liner.
- e. Add text in the main body of the report that states whether all the existing seams were re-tested.
- f. The photographs indicate that the liner was dirty after the windstorm. Add text describing the measures taken, if any, to clean the liner before the repair seams were welded.

¹ WET. April 18, 2018. Cow Palace Dairy Facility Installation Quality Assurance and Quality Control Manual – Facilities Covered: Lagoon 1.

- g. Describe why a patch was applied to the 360-foot tear instead of welding the seam back together. Add a text reference to Appendix A, Lagoon 1 Drawing C-19.
 - h. Appendix A, Lagoon 1 Drawing C-19 shows about a 25-foot section in the middle of the tear that was not patched. The photos above indicate that the tear occurred all the way across the liner. Add text in the body of the report that explains why the patch was not placed all the way across the tear.
 - i. Add text describing when Respondents first notified EPA of the blowout event, both verbally and in writing.
2. EPA approved the Cow Palace Dairy Lagoon No. 1 design documents in a letter dated April 19, 2018 (EPA letter No. 167). EPA cannot find a record of approving any design documents regarding Lagoon 1 after April 19, 2018. The “References” section of the Report lists documents related to Lagoon 1 that are dated after EPA’s April 19, 2018 approval letter including:

Anchor QEA (Anchor QEA, LLC), 2019a. *Construction Drawings*. Cow Palace Lagoon No. 1. Prepared for Cow Palace Dairy, LLC. June 2019.

Anchor QEA, 2019d. *Addendum Number 1*. Cow Place Lagoon No. 1. Prepared for Cow Palace Dairy, LLC. April 24, 2019.

Anchor QEA, 2019e. *Construction Quality Assurance Plan*. Prepared for Cow Palace Dairy. August 29, 2018.

Add text that identifies EPA’s approval of these documents (letter date and EPA letter No.).

3. In Appendix A, the CQA Report cites some references with different dates than the dates Identified in the “References” section of the main Report.

Construction Drawings numbered 1 through 20 bearing the title; 100% Design Submittal, Cow Palace Dairy, Lagoon No. 1 Liner Project, SDWA-10-2013-0080. Anchor QEA. August 28, 2019.

Cow Palace Lagoon 1, Construction Inspection Plan, Administrative Order on Consent Docket No. SDWA-10-2013-0080. Anchor QEA. August 9, 2019.


The dates should match. These documents also appear to be dated after EPA’s approval of the project documents.

4. Add a new table showing in chronological order all volumetric measurements of the amount of liquid collected in the lagoon sump from January 1, 2020 through today.
5. In the main body of the Report, describe the repairs that were made to the primary liner in response to excessive amounts of liquid that were measured in the sump post-construction.

6. Add a new appendix to the Report for each of these:
- a. All complete daily construction quality assurance (CQA) reports from November 23, 2019 through December 17, 2019.
 - b. All photos from November 23 through December 17, 2019.
 - c. If any written authorizations by the Owner's Representative exist indicating that welds done in temperatures below 32 degrees F were done within specifications, add the authorizations to the completion Report. Include documentation that the requirements for welding in sub-freezing conditions were met (see QA/QC manual² Appendix A, Section 3.3.2).
 - d. The windstorm and the subsequent effort to pull the secondary liner back into place with heavy equipment would have placed significant stress on the existing liner seams that had already been air-pressure tested. There is no record that the existing seams were retested after the blowout event. Add any such records.
 - e. There is no record that the liner panels were tested for tears or leaks other than by visual inspections when the degree of damage may have required replacement or, at a minimum, electronic leak detection. Add all additional records of testing that were completed on the damaged liner.
 - f. Add documentation of any panels that were removed after being damaged in the blowout event.
 - g. Add documentation of the re-examination, re-inspection and clearance of the repaired secondary liner that was completed prior to installation of the overlying primary geomembrane installation.

Pursuant to Paragraph 14 of the Consent Order, Respondents must address these comments in the Report and resubmit it to EPA no later than November 24, 2021. You may contact me at (206) 553-6904, or your legal counsel may contact Jennifer MacDonald at (206) 553-8311, if you have any questions regarding this letter.

Sincerely,



Eric Winiecki
EPA Project Coordinator
Enforcement and Compliance Assurance Division

cc: Jennifer MacDonald
Rene Fuentes
Mark Larsen, ANCHOR QEA

² Ibid.